UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
2193	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/784,374	TAKACSI-NAGY ET AL.
	Examiner	Art Unit	
	JUE S. WANG	2193	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>06 April 2009</u>.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-3,18-20 and 43-61</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-3, 18-20, and 43-61</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-3, 18-20, and 43-61 have been examined.

2.   Claims 4-14, 21-31 and 35-42 were cancelled in Amendment dated 6/9/2008. Claims 15-

17 and 32-34 were cancelled in Amendment dated 10/29/2008.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this
> or a foreign country, before the invention thereof by the applicant for a patent.

4.   Claims 1, 18, 43-45, 52-54, and 61 are rejected under 35 U.S.C. 102(a) as being

anticipated by Carey et al. "Integration, Web Services Style" (hereinafter Carey).

5.   As per claim 1, Carey teaches the invention as claimed, including a method for extending

a language, comprising the steps of:

        selecting a program source file including a workflow definition created using a workflow

language (i.e., Java workflow programs see page 18, section 2.1), wherein the program source

file includes a source code and classes therein and a workflow definition that is specified in the

form of annotations to the source code and the classes (i.e., a JWF is a Java class with

annotations the describe the flow, see page 18, section 2.1);

        extending the source code with a plurality of workflow constructs, including an action

construct representing an activity that allows a first software component to call an operation on a

second software component (i.e., JWF includes constructions to specify Java method invocation,

see pages 18-19, section 2.1);

using a workflow program according to the workflow definition, including processing,

using a computer including a processing device operating thereon, the action construct to allow

the first software component to call an operation on the second software component (see pages

18-19, section 2.1, Figure 1); and

passing, according to the workflow definition in the form of annotations to the source

code, information selected form one or more files, documents and/or tasks between system

resources, according to a set of procedural rules to generate activities at the computer as defined

by the workflow definition (see page 18-19, section 2.1, Figure 1).

6.   As per claim 18, the limitations recited in this system claim are substantially similar to

those recited in claim 1. Therefore, it is rejected using the same reasons as claims 1.

7.   As per claim 43, Carey teaches where in the workflow definition is invoked by executing

a software application (i.e., web service invocation as one of the primary means for starting or

continuing interactions with business processes, see page 18, paragraph 2).

8.   As per claim 44, Carey teaches wherein the program source file is a Web service file that

includes the workflow definition constructs (see page 18, paragraph 2, page 21 paragraph 3; EN:

business processes are web services where the business process is defined by JWF).

9.   As per claim 45, Carey teaches wherein the workflow definition constructs of the Web

Service file also references methods and variables for software application running on the system

using the workflow (see page 18, last paragraph, page 19, first paragraph).

10.   As per claims 52-54, the limitations recited in these method claims are substantially

similar to those recited in claims 43-45. Therefore, they are rejected using the same reasons as

claims 43-45.

11.   As per claim 61, the limitations recited in this computer readable storage medium claim

are substantially similar to those recited in claim 1. Therefore, it is rejected using the same

reasons as claim 1.

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

13.   Claims 2, 3, 19, 20, 46, 47, 51, 55, 56, and 60 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Carey et al. "Integration, Web Services Style" (hereinafter Carey), in

view of Christensen et al "Extending Java for High-Level Web Service Construction"

(hereinafter Christensen).

14.   As per claim 2, Carey does not explicitly teach the plurality of workflow definition

constructs are provided as markup language commands that are then used as annotations to the

source code and the classes.

        Christensen teaches providing markup language commands that are used as annotations

to the source code and the classes (see page 6, paragraphs 3, 6, page 7, Fig 3, page 9).

        It would have been obvious to one of ordinary skill in the art at the time of the invention

that the workflow annotations could have been provided in markup language as taught by

Christensen because Carey teaches that the JWF file contains XML related elements (i.e., XML

workflow variable and an XQuery expression, page 18, last paragraph) and markup language is a

well known standard in web service related applications.

15.   As per claim 3, Carey does not explicitly teach the plurality of workflow definition

constructs are provided as XML commands that are then used as annotations to the source code

and the classes.

        Christensen teaches providing XML commands that are used as annotations to the source

code and the classes (see page 6, paragraphs 3, 6, page 7, Fig 3, page 9).

        It would have been obvious to one of ordinary skill in the art at the time of the invention

that the workflow annotations could have been provided in XML as taught by Christensen

because Carey teaches that the JWF file contains XML related elements (i.e., XML workflow

variable and an XQuery expression, page 18, last paragraph) and XML is a well known standard

in web service related applications.

16.   As per claims 19 and 20, the limitations recited in these system claims are substantially similar to those recited in claims 2 and 3. Therefore, they are rejected using the same reasons as claims 2 and 3.

17.   As per claim 46, Carey teaches wherein the Web Service file includes the workflow definition constructs as a plurality of workflow annotations to the source code and classes defined in the Web Service file (i.e., annotations reference XQuery methods, see page 18, last paragraph, page 19, first paragraph). Carey does not explicitly teach the annotations are implemented in XML.

Christensen teaches providing XML commands that are used as annotations to the source code and the classes (see page 6, paragraphs 3, 6, page 7, Fig 3, page 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention that the workflow annotations could have been provided in XML as taught by Christensen because Carey teaches that the JWF file contains XML related elements (i.e., XML workflow variable and an XQuery expression, page 18, last paragraph) and XML is a well known standard in web service related applications.

18.   As per claim 47, Carey as modified teaches wherein the XML workflow annotations to the source code and classes define a flow logic that can then reference the methods and variables defined in the Web Service file (see page 18, last paragraph, page 19, first paragraph).

19.   As per claim 51, Carey teaches a Java programming language as the program source file,
wherein the Java programming language is extended by adding workflow constructs to said Java
programming language. and wherein said extending further comprises embedding the workflow
constructs in the Java programming language (see page 18, last paragraph, page 19, first
paragraph).

Carey does not explicitly teach the annotations are implemented in XML.

Christensen teaches providing XML commands that are embedded in the Java
programming language extend Java (see page 6, paragraphs 3, 6, page 7, Fig 3, page 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention
that the workflow annotations could have been provided in XML as taught by Christensen
because Carey teaches that the JWF file contains XML related elements (i.e., XML workflow
variable and an XQuery expression, page 18, last paragraph) and XML is a well known standard
in web service related applications.

20.   As per claims 55, 56, and 60, the limitations recited in these method claims are
substantially similar to those recited in claims 46, 47, and 51. Therefore, they are rejected using
the same reasons as claims 46, 47, and 51.

21.   Claims 48 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carey
et al. "Integration, Web Services Style" (hereinafter Carey).

22.   As per claim 48, Carey does not explicitly teach the workflow definitions are provided as

a separate Work Flow file that includes workflow definition commands, and that are invoked by

the Web Service file using the work definition constructs, to use the workflow as defined by the

Work Flow file. However, Carey does teach that the workflow definition commands are invoked

by the workflow definition constructs (i.e., annotations reference Java or XQuery methods, see

page 18, paragraphs 2, 3, page 19, paragraph 1, Figure 1). It would have been obvious to one of

ordinary skill in the art at the time of the invention to keep the workflow definition commands

separate from the Web Service file invoking the work definition construct as this would improve

code organization.

23.   As per claim 57, the limitations recited in this method claim are substantially similar to

those recited in claim 48. Therefore, it is rejected using the same reasons as claim 48.

24.   Claims 49, 50, 58, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Carey et al. "Integration, Web Services Style" (hereinafter Carey), in view of Becker et al. (US

6,904,161 A1).

25.   As per claim 49, Carey teaches a light-weight virtual machine at the computer that

processes the workflow and that is enabled to, at a particular point in the workflow process, save

the workflow execution space including program stack and variable state (i.e., the JWF runtime

container that enables the application to be deactivated, see page 19, paragraph 2).

Carey does not explicitly teach at a later point in time, revive the workflow at the same point in the workflow process using the saved stack and variable state.

Becker is cited to teach a method of workflow execution, including at a particular point in the workflow process, save the workflow state, and, at a later point in time, revive the workflow at the same point in the workflow state (see column 5, line 65 - column 3).

It would have been obvious to one of ordinary skill in the art to have modified Carey such that at a later point in time, revive the workflow at the same point in the workflow process using the saved stack and variable state as taught by Wilcox such that the workflow process can be resumed (see column 6, lines 1-3 of Becker)

26.   As per claim 50, Becker teaches setting the workflow program in a dormant condition; and revive the dormant workflow program to its exact state before going dormant (see column 5, line 65 - column 3).

27.   As per claims 58 and 59, the limitations recited in these method claims are substantially similar to those recited in claim 49 and 50. Therefore, they are rejected using the same reasons as claims 49 and 50.

Response to Arguments

28.   Rejection of claims 1, 18, and 61 under §103(a):

29.   As per independent claims 1, 18, and 61, Applicants' arguments have been fully considered, but are moot in light of the new grounds of rejection.

Conclusion

30.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

31.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jue S. Wang whose telephone number is (571) 270-1655. The

examiner can normally be reached on M-Th 7:30 am - 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lewis A. Bullock, Jr./   Jue Wang
Supervisory Patent Examiner, Art Unit 2193   Examiner
                                                           Art Unit 2193